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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,501	05/10/2004	Igor K. Voln		3500

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EXAMINER

INGBERG, TODD D

ART UNIT	PAPER NUMBER
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2193

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05/02/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/709,501	Applicant(s) VOLN, IGOR K.	
	Examiner Todd Ingberg	Art Unit 2193	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 August 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/10/04</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Claims 1 – 16 have been examined.

#### ***Information Disclosure Statement***

1. The Information Disclosure Statement filed May 10, 2004 has been considered.

#### ***Drawings***

2. The new drawings filed August 25, 2004 have been received. the following figures are under objection for having shading that makes the characters within the shading too dark for Patent literature. Figures 2, 3, 5, 8, 9 and 12. The shading is important to the figures. The Applicant should look to placing the text on a white background and put this within the shaded block.

#### ***Specification***

3. A substitute specification is required because the font and headers (missing or in wrong place i.e. Abstract) are wrong (too large).

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification

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contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

### Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.
- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
  - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
  - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

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- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

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- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

***Claim Objections***

4. Claims 1 and 5 objected to because of the following informalities: because of multiple periods. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The presence of terms in parenthesis is unclear if this is a limitation. Corrective action required.

Claim 15 is indefinite with the limitation “built according to the commonly accepted code indentation rules.”

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 4, 5, 7 – 9, 11, 12, 14 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by James Martin, “Principles of Object-Oriented Analysis and Design”, June 1992.

**Claim 1**

**Martin anticipates a method of representation and manipulation of a structured entity that presents data in a tree-like form based on mapping of every rule from the set of structure defining rules to dynamically or statically created tree-like representation.** This mapping is then used for building and manipulating tree-like representation of instances of a structured entity. Martin, pages 402 – 403 – note entity – person and the rules for the sequences. Also, the ability to expand or collapse and the ability to show the code such as the CASE statement present in Figure A19).

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**Claim 4**

**A method according to claim 1 further comprising the steps of: providing a plurality of trees wherein each tree is coupled to its own programmable representation which is based on the structured entity type or content, and changing the representation of structured entities from a conventional state (text) to a related representation state.**

See the rejection for claim 1 the figure A.19, + and -)

**Claim 5**

**A method according to claim 1 further comprising the steps of creating, modifying, manipulating, and deleting representations.** The representations could also be static (just based on the rules) or dynamic (build dynamically based on the rules and/or other factors, such as structured entity content). If a rule representation changes, the structured entity representation can be dynamically rebuilt according to the appropriate version of the rule representation. (Martin, editing – editor, page 276).

**Claim 7**

**A method according to claim 1 further comprising of creating a set of tree-like structures and a way to move pieces of structured entity based on representation to another or the same structured entity to modify it via its tree-like representation.**

**Claim 8**

A method according to claim 1 further comprising the opportunity to drill-down the nodes of the tree-like representation to create another instance of representation of structured entity that includes only a subset of the nodes of the original structured entity. This new instance can be edited separately and dynamically represent the original subset of nodes in the original structured entity or becomes a standalone instance of structured entity, that could be merged back to the original tree later. (Martin use of + and – in claim 1 and show code)

**Claim 9**

A method according to claim 1 further comprising the opportunity to drill-down the nodes of the tree-like representation to expand the underlying properties of the structured entity or expose the related content, which could also be represented according to the claim 1.  
See the rejection for claim 1.

**Claim 11**

A method according to claim 1 when the user is not a person, but a program.  
Interpretation – Could be met by Messaging in Object Technology as per Martin. Also, Martin, page 188, Actors – role such as a machine.

**Claim 12**

A method according to claim 1 where instances of a structured entity are modified using both its regular representation and the tree like representation described in the present invention. As per claims 4 and 5.

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**Claim 14**

A method according to claim 1 where the representations are built by the user according to the user's needs or preferences. (Martin, page 133, box)

**Claim 16**

A method according to claim 1 where a prerecorded sequence of actions can be applied to a set of nodes of tree-like representation based on the factors common for the set of nodes or their content. (Martin, Reusability – part of object technologym pages 39-40, 106-107, 182 – 186 and 249)

8. Claims 2, 3, 6 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin as applied to claim1 above, and further in view of the common college text book by Aho et al, Compilers Principles, Tools and Techniques.

**Motivation to Combine**

Martin teaches programming with tree structures and Aho teaches the mundane details of programming language theory. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teaching of Martin to develop with a tree structure producing code meeting common programming language constructs, syntax and semantics as taught by Aho. Because models that generate code make programming easier.

**Claim 2**

A method according to claim 1 wherein the rules are a BNF/EBNF grammar. (Aho, page )

**Claim 3**

**A method according to claim 2 wherein the input (instance of a structured entity) is a piece of code in a programming language** (Martin, page 403, Case statement), or data, or binary file, or a communication protocol message(s).

**Claim 6**

**A method according to claim 3 further comprising the steps of writing programs or modifying data by creating, modifying, copying, moving, and deleting of single nodes and sets of nodes in such specifically built tree like representation of the structured entity.** (Martin, page 278 and 226-227, editing models – editor)

**Claim 10**

A method of editing content using tree-like representation according to claim 1 that does not let the user enter the content that does not conform to the related grammar or verifies the changes at the time of the merge to determine which ones can and which ones can't be applied, and notifies the user. (Aho, page 8, type checking – Aho teaches type checking. One of ordinary skill in the



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art would understand how type checking in an object modeling environment would be employed to validate changes to the model and how to produce an error message)

**Claim 15**

A method according to claim 3 where the tree-like representation for code files is built according to the commonly accepted code indentation rules. (Martin, page 402, Figure A.18 and text top nested shows indication.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martin and Aho et al as applied to claims 2 and 3 above, and further in view of the Andrew File System as taught in 1994 by Coulourus.

**Claim 13**

A method of source control based on the tree-like representation according to the claim 3, when the content is locked for manipulations at the level of nodes or sets of nodes of the tree, so that multiple users can work on different parts of the content of the same structured entity (file) simultaneously. As per claim 1 the tree structure is taught by Martin but Martin does not teach a collaborative development environment. It is the Andrew File System that teaches collaborative environment (Andrew, pages 233 – 243). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teaching of Martin to develop with a tree structure producing code meeting common programming language constructs, syntax and semantics as taught by Aho and permit multiple users to edit.

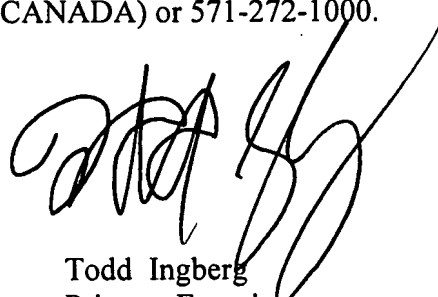
***Correspondence Information***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Todd Ingberg whose telephone number is (571) 272-3723. The examiner can normally be reached on during the work week..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Todd Ingberg  
Primary Examiner  
Art Unit 2193

TI